REMARKS

Claims 1-20 were originally filed and currently pending in the present application.

Claims 1-20 were rejected in the January 25, 2007 Office Action.

No claims have been allowed.

Claims 1 and 11 are amended to correct a minor informality.

Reconsideration of the claims is respectfully requested.

CLAIM REJECTIONS -- 35 U.S.C. § 103

Claims 1-20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U. S. Patent No. 7,027,426 B2 to *Billhartz* (hereinafter "Billhartz") in view of U. S. Patent Application Publication No. 2002/0039357 A1 to *Lipasti, et al.* (hereinafter "Lipasti"). The Applicant respectfully traverses the rejection.

In *ex parte* examination of patent applications, the Patent Office bears the burden of establishing a prima facie case of obviousness. MPEP § 2142, p. 2100-133 (8th ed. rev. 4, October 2005). Absent such a prima facie case, the applicant is under no obligation to produce evidence of nonobviousness. *Id.* To establish a *prima facie* case of obviousness, three basic criteria must be met: *Id.* First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. *Id.* Second, there must be a reasonable expectation of success. *Id.* Finally, the prior art reference (or references when combined) must teach or suggest all the claim

limitations. *Id.* The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *Id.*

Claim 1 requires

> 1. (Original) For use in a mobile ad hoc network formed by a plurality of mobile ad hoc network (MANET) nodes, a first MANET node capable of collecting route information associated with a first route from a source MANET node to a destination MANET node, said first MANET node comprising:
>
> a radio frequency (RF) transceiver capable of wirelessly communicating with other ones of said plurality of MANET nodes according to an ad hoc on-demand vector (AODV) protocol; and
>
> a controller capable of receiving incoming data packets from said RF transceiver and sending outgoing data packets to said RF transceiver, wherein said controller receives a Path Marker Request message generated by said source MANET node and retrieves first route topology data associated with said first route from said first Path Marker Request message, said route first topology data identifying all intermediate MANET nodes in said first route coupling said first MANET node to said source MANET node.

The Examiner alleges that the claimed "controller" is met by Billhartz's controller 44 that includes a "route discovery unit 50". Individual nodes 30 include controller 44.

No art of record, alone or in combination, teaches or suggests that the controller receives a Path Marker Request message generated by the source MANET node and retrieves first route topology data associated with a route from the first Path Marker Request message, or that the first route topology data identifies all intermediate MANET nodes in the route coupling the first MANET node to the source MANET node, as claimed.

The Examiner alleges that this is taught by Billhartz at col. 5, lines 3-31:

> The method begins (block 100) and includes transmitting a route requests RREQ from the source node S to discover routing to the destination node D over multiple channels, as indicated at block 102 in FIG. 8. the source node S does not currently know what channel the destination node D is normally on. In the example illustrated in FIG. 1, the source node sends the route request RREQ to intermediate nodes A-C. The source node S and node C may normally be on a first channel, node B may normally be on a second channel, and node A may normally be on yet a third channel, for example. So, the source node S sends the route request RREQ over all the existing channels that the network is currently operating on to reach all nodes 30 within one-hop. Preferably, the route request RREQ would include a source node channel identifier indicating what channel the source node S is on.
>
> Separately, on each channel, route discovery proceeds as usual (FIG. 2). Each intermediate node A, B and C determines whether the node can support the route request RREQ. If the node cannot support the particular request RREQ, then the request is denied or simply not forwarded by the node. If the node, for example node A, can support the particular request RREQ, then the node forwards the route request RREQ to other intermediate nodes, e.g node H, on all channels and temporarily reserves node resources for that route request if the request is for traffic other than best-effort. For best-effort, no resources necessarily need be reserved. The route request RREQ is eventually forwarded to the destination node D.

The only thing taught as being sent and received here is route request RREQ. Route request RREQ is not taught or suggested to be a "path marker request message" as claimed, or an equivalent of the path marker request message. Nothing in the art of record teaches or suggests that first route topology data associated with a route can be retrieved from the route request

RREQ, as would be required. As the Examiner notes, Billhartz only discloses that RREQ includes a "source node channel identifier" (col. 5, lines 16-17).

The Examiner instead refers to Lipasti paragraph 0010, indicating that "topology" is read as "routing addresses":

> [0010] According to a preferred embodiment of the invention, the routing addresses are composed from IP addresses. This provides the great advantage that there is no need for a protocol, such as ARP, arranging mapping from network layer addresses to data link layer addresses. This reduces the bandwidth-intensive broadcast traffic in the mobile ad hoc networks.

Lipasti only appears to teach, in relevant part, of using additional source/destination routing addresses and using these for routing instead of network layer addresses or data link layer addresses. This does not discuss anything about a network route topology at all, and certainly nothing in Lipasti specifically discusses a route topology. A network address, or even a collection of addresses, is not a topology.

Further, even if Lipasti's addresses were somehow a "topology", nothing in the art of reference teaches or suggests that Lipasti's addresses can or should be used as part of Billhartz's route request RREQ, or that these addresses could be extracted from the RREQ.

Claim 11 includes similar limitations. As can be seen, no art of record, alone or in combination, teaches or suggests the limitations of the independent claims.

Further, nothing in Billhartz, or Lipasti, alone or in combination, teaches or suggests storing a retrieved route topology data in a route table associated with a controller, as in claims 2 and 12.

Other distinctions exist, but those discussed above serve to show that all claims distinguish over all art of record.

Accordingly, the Applicant respectfully requests the Examiner to withdraw the § 103 rejection with respect to these claims.

SUMMARY

For the reasons given above, the Applicant respectfully requests reconsideration and allowance of the pending claims and that this application be passed to issue. If any outstanding issues remain, or if the Examiner has any further suggestions for expediting allowance of this application, the Applicant respectfully invites the Examiner to contact the undersigned at the telephone number indicated below or at ***jmockler@munckbutrus.com***.

The Commissioner is hereby authorized to charge any additional fees connected with this communication or credit any overpayment to Deposit Account No. 50-0208.

Respectfully submitted,

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